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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/708,941	04/02/2004	Ti-Wen Yuan	MTKP0058USA	2940
27765	7590	06/11/2008		
NORTH AMERICA INTELLECTUAL PROPERTY CORPORATION				
P.O. BOX 506				
MERRIFIELD, VA 22116				
EXAMINER				
SINGH, HIRDEPAL				
ART UNIT		PAPER NUMBER		
2611				
NOTIFICATION DATE		DELIVERY MODE		
06/11/2008		ELECTRONIC		

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

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Office Action Summary

Application No.

10/708,941

Applicant(s)

YUAN ET AL.

Examiner

HIRDEPAL SINGH

Art Unit

2611

Period for Reply -- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 14 March 2008.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-27 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-3, 8-12, 17-21, 26 and 27 is/are rejected.
- 7) ☒ Claim(s) 4-7, 13-16 and 22-25 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date _____
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date _____
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: _____

DETAILED ACTION

1. This action is in response to the communication filed on March 14, 2008. The finality of the previous office action is withdrawn. Claims 1-27 are pending and have been considered below.

Response to Arguments

2. Applicant's arguments with respect to claims 1-27 have been considered but are moot in view of the new ground(s) of rejection.

Claim Rejections - 35 USC § 103

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. Claims 1, 8, 9, 10, 17, 18, 19, 26, and 27 are rejected under 35 U.S.C. 103(a) as being unpatentable over Stoter et al. (US 2003/0026363) in view of Ben-Ayun et al. (US 2005/0003783).

Regarding Claims 1, 10, and 19:

Stoter discloses an Automatic Gain Control method and apparatus for a wireless receiver receiving plurality of data blocks where the transmitted data is in discontinuous (Time Discrete Multiple Access) mode (abstract; paragraphs 0003, 0046) comprising;

receiving a first frame (figure 1 and 2 show frame to be received in the system), amplifying a RF signal corresponding to the first frame with a gain value and down converting (14 and 16 in figure 1) the RF signal to generate a baseband signal (paragraph 0035; paragraph 0036, lines 13-20; figure 3);

updating the gain value (updating 16 based on feedback through 20 in figure 1) according to the power level of the baseband signal corresponding to the first frame, wherein the updated gain value is for amplifying the RF signal corresponding to a second frame (paragraph 0009, power corresponds to a prior frame) when receiving the second frame.

Stoter discloses all of the subject matter as describe above and further discloses that the in the received frames has different blocks as shown in figures 1-3, and system is capable of advantageously working with continuous or discontinuous signal and accordingly adjust the gain based on power level of the received signal (paragraphs 0031, 0043, 0046), examiner brings a new reference to make rejection clear for, determining whether a first signal block is in the discontinuous transmission mode or not, for resuming the gain value according to the power level of the baseband signal corresponding to a third frame if the first signal block is in the discontinuous transmission mode; wherein the third frame belongs to a third signal block which is sent before the first signal block and the third signal block is not in the discontinuous transmission mode.

Ben-Ayun in the same field of endeavor discloses a system and method for automatic gain control circuit by determining whether a first signal block is in the

discontinuous transmission mode or not (paragraphs 0007 and 0036, discontinuous mode as TDMA), for resuming the gain value according to the power level of the baseband signal corresponding to a third frame if the first signal block is in the discontinuous transmission mode (automatic gain adjustment is suitable for detecting discontinuous mode, paragraph 0036); wherein the third frame belongs to a third signal block which is sent before the first signal block (a signal sent following by and preceding a signal, paragraph 0048) and is not in the discontinuous transmission mode.

Therefore, it would have been obvious to one of ordinary skill in the art at the time of invention to use the teachings of Ben-Ayun in the Stoter system to detect whether the received transmission signal is in discontinuous mode or not, and adjust the gain value in the automatic gain control circuit according to the mode of the signal i.e. keep the same gain value as it was for a continuous signal otherwise update or change or adapt the gain value, to provide an automatic gain controller with fast attack that is able to cope with the overshoot particularly in the case where the system receives discontinuous transmission signal to adaptable gain or attenuation adjustment of signal based on control signal to take care of rapid adjustments in the system.

Regarding Claims 8, 17 and 26:

Stoter discloses an Automatic Gain Control method and apparatus for a wireless receiver as in claims 1, 10, and 19 above, and further discloses that the power of the input base band signal is compared with a desired/target power level, the gain is increased if the power of input base band signal is less than the desired/target power level and vice versa (figure 4; paragraphs 0036-0037).

Regarding Claims 9, 18 and 27:

Stoter discloses an Automatic Gain Control method and apparatus for a wireless receiver as in claims 8, 10, and 19 above, and further discloses that the input signal after down conversion to base band signal is fed to analog to digital converter in the wireless receiver (figure 3; paragraph 0035).

8. Claims 2, 11 and 20 are rejected under 35 U.S.C. 103(a) as being unpatentable over Stoter et al. (US 2003/0026363) in view of Ben-Ayun et al. (US 2005/0003783) as applied to claims 1, 9 and 19 above, and further in view of Ruohonen (US 2002/0163980).

Regarding Claims 2, 11 and 20:

Stoter discloses an Automatic Gain Control method and apparatus for a wireless receiver as in claims 1, 10, and 19 above, but doesn't explicitly disclose that the transmitter is transmitting the RF signal in frequency hopping manner and the first, second, and third frames corresponds to same frequency channel. Ruohonen discloses a similar Automatic Gain Control method and apparatus for a wireless receiver having discontinuous transmission and further discloses that the transmission is in a frequency hopping manner where the transmitted signal has the information about frequency used by the cell/network, surrounding cells, frequency hopping etc. (abstract; paragraph 0006; paragraph 0007, lines 5-10). Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to use the frequency hopping in the transmitting radio signals in Stoter by switching a carrier among different

frequency channels. One would have been motivated to use frequency hopping for transmitting radio signals for making it resistant to noise or interference.

9. Claims 3, 12, and 21 are rejected under 35 U.S.C. 103(a) as being unpatentable over Stoter et al. (US 2003/0026363) in view of Ben-Ayun et al. (US 2005/0003783) as applied to claims 1, 9 and 19 above, and further in view of Cahill (US 5,083,304).

Regarding Claims 3, 12 and 21:

Stoter discloses an Automatic Gain Control method and apparatus for a wireless receiver as in claims 1, 10, and 19 above, but doesn't explicitly disclose that the transmitter is transmitting the RF signal with single channel frequency and second frame is sent immediately after first and third frame is last frame in third signal block. However, Cahill discloses a similar Automatic Gain Control method and apparatus for a wireless receiver having discontinuous transmission and further discloses that the transmitter is transmitting signal using single channel (abstract; column 1, lines 35-58). Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to use the single channel to send RF signals in Stoter. One would have been motivated to use single channel for transmitter to transmit radio signals to make it useful for the systems using dedicated bandwidth and to keep the system simple and reliable.

Allowable Subject Matter

5. Claims 4-7, 13-16 and 22-25 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.
6. The following is a statement of reasons for the indication of allowable subject matter: The Prior art of record Stoter et al discloses an automatic gain control circuit receiving plurality of frames with plurality of blocks, the system is capable of detecting whether a block in the frame is in a discontinuous transmission mode or not, if the signal is in discontinuous mode the gain value is kept according to the previous signal that was not in discontinuous mode and otherwise adjust the automatic gain control value accordingly. The cited prior art references fails to disclose that the discontinuous transmission mode determination is based on computing a first number of valid frames belonged to the first signal block and comparing first value with a predefined value, if first value is larger or equal to predefined value means first signal is not in the discontinuous mode and vice versa. Also it would not have been obvious to a person of ordinary skill in the art to determine the discontinuous mode for adjusting the gain value by computing a first number of valid frames from the first signal block and comparing first value with a predefined value, if first value is larger or equal to predefined value means first signal is not in the discontinuous mode.

Conclusion

7. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

a. Yeo et al. (US 2003/0128744) discloses a system and method for detecting discontinuous mode transmission in mobile communication.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to HIRDEPAL SINGH whose telephone number is (571) 270-1688. The examiner can normally be reached on Mon-Fri (Alternate Friday Off) 8:30AM-6:00PM EST.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Shuwang Liu can be reached on 571-272-3036. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Art Unit: 2611

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/H. S./

Examiner, Art Unit 2611

June 6, 2008

/Shuwang Liu/

Supervisory Patent Examiner, Art Unit 2611